Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-24 (Canceled)

Claim 25. (Currently Amended) Apparatus for ablating tissue in an organ in a body of a subject, comprising:

a probe, which is ~~adapted to be~~ inserted into the body so as to contact the tissue to be ablated at a desired position in the organ, the probe comprising:

at least one sensor, which ~~is adapted to~~ measures one or more local parameters at the position prior to and after ablating the tissue and a position sensor which generates signals for determining position and orientation coordinates of the probe; and

an ablation device, which ~~is adapted to~~ appl~~y~~ies a given dosage of energy to the tissue so as to ablate the tissue;

a display, which ~~is adapted to~~ displays a map of the organ; and

a controller, which ~~is adapted to~~ determines the position and orientation coordinates of the probe using the signals generated by the position sensor and generates the map showing, based on the one or more local parameters measured by the at least one sensor, a predicted extent of ablation of the tissue to be achieved for the given dosage of energy, and an actual extent of the ablation determined subsequent to ablating the tissue, for comparison with the predicted extent using the position and orientation coordinates.

Claim 26. (Canceled)

Claim 27. (Currently Amended) The apparatus according to claim 2~~6~~5, wherein the controller is adapted, responsively to the output of the

position sensor, to determine at least one of a penetration depth of the probe in the tissue and an orientation angle of the probe relative to the tissue, and to predict the extend of the ablation responsively to the at least one of the penetration depth and the orientation angle.

Claim 28. (Currently Amended) The apparatus according to claim 2~~6~~5, wherein the controller is adapted to generate the map by processing the output of the position sensor as the probe is brought into contact with the tissue at multiple positions inside the organ.

Claim 29. (Currently Amended) The apparatus according to claim 28, wherein the at least one sensor ~~further~~ comprises an electrical sensor, which is adapted to measure electrical potentials at the multiple positions, and wherein the controller is adapted to provide an indication of electrical activity on the map, based on the measured electrical potentials.

Claim 30. (Original) The apparatus according to claim 25, wherein the at least one sensor comprises one or more ultrasonic transducers, which are adapted to transmit ultrasonic waves into the tissue and to generate an output signal responsively to the ultrasonic waves reflected from the tissue.

Claim 31. (Original) The apparatus according to claim 30, wherein the controller is adapted to measure a propagation speed of the ultrasonic waves in the tissue responsively to the output signal from the one or more ultrasonic transducers, and to estimate a temperature of the tissue based on the propagation speed.

Claim 32. (Original) The apparatus according to claim 30, wherein the controller is adapted to assess blood flow in the tissue responsively to the output signal from the one or more ultrasonic transducers.

Claim 33. (Original) The apparatus according to claim 30, wherein the controller is adapted to determine the actual extent of the ablation based on the output signal from the one or more ultrasonic transducers after applying the given dosage of the energy.

Claim 34. (Original) The apparatus according to claim 25, wherein the controller is adapted to determine an orientation angle of the probe relative to the tissue, and to predict the extent of the ablation responsively to the orientation angle.

Claim 35. (Original) The apparatus according to claim 25, wherein the one or more local parameters comprise at least one of a penetration depth of the probe in the tissue, an electrical impedance between the probe and the tissue, a temperature of the tissue and a flow of blood associated with the tissue.

Claim 36. (Original) The apparatus according to claim 25, wherein the controller is adapted to adjust the dosage of the energy responsively to the map.

Claim 37. (Original) The apparatus according to claim 25, wherein the ablation device comprises an electrode, which is adapted to apply radio frequency (RF) energy to ablate the tissue.

Claim 38. (Original) The apparatus according to claim 25, wherein the probe is adapted to ablate a succession of mutually-adjacent

sites in the tissue, and wherein the controller is adapted to provide a visual indication of overlap between the sites.

Claim 39. (Original) The apparatus according to claim 25, wherein the organ comprises a heart, and wherein the probe comprises a catheter.

Claim 40. (Currently Amended) Apparatus for ablating tissue in an organ inside a body of a subject, comprising:

a probe, which is ~~adapted to be~~ inserted into the body so as to contact the tissue to be ablated, the probe comprising:

a position sensor, which ~~is adapted to~~ generate<u>s</u> an output indicative of a position and orientation of the probe relative to the tissue with which the probe is in contact; and

an ablation device, which ~~is adapted to~~ appl~~y~~<u>ies</u> a given dosage of energy to the tissue so as to ablate the tissue;

a display, which ~~is adapted to~~ display<u>s</u> a map of the organ; and

a controller, which ~~is adapted to~~ compute<u>s position and orientation coordinates of the probe based on the output from the position sensor and</u>, ~~based on the position and orientation of the probe,~~ a prediction of an extent of ablation of the tissue to be achieved for the given dosage of energy, so as to enable the dosage to be adjusted responsively to the prediction <u>using the position and orientation coordinates of the probe</u>.

Claim 41. (Original) The apparatus according to claim 40, wherein the position sensor comprises one or more sensor coils, which are adapted to generate the output indicative of

the position and orientation responsively to an externally-applied magnetic field.

Claim 42. (Original) The apparatus according to claim 40, wherein the controller is adapted to generate a map of the organ by processing the output of the position sensor as the probe is brought into contact with the tissue at multiple positions inside the organ, and recording position coordinates of the probe at the multiple positions.

Claim 43. (Original) The apparatus according to claim 42, wherein the controller is adapted to determine an orientation angle of the probe relative to the tissue using the map.

Claim 44. (Original) The apparatus according to claim 43, wherein the controller is adapted to determine a depth of penetration of the probe into the tissue, based on the position coordinates of the probe and on the map, and to predict the extent of the ablation responsively to the depth of penetration and the orientation angle of the probe.

Claim 45. (Original) The apparatus according to claim 40, wherein the probe comprises a sensor, which is adapted to measure at least one local parameter selected from a list of local parameters consisting of an electrical impedance between the probe and the tissue, a temperature of the tissue and a flow of blood associated with the tissue, and wherein the controller is adapted to predict the extent of the ablation responsively to the at least one local parameter.

Claim 46. (Original) The apparatus according to claim 40, wherein the controller is adapted to adjust the dosage of the energy responsively to the map.

Claim 47. (Original) The apparatus according to claim 40, wherein the ablation device comprises an electrode, which is adapted to apply radio frequency (RF) energy to ablate the tissue.

Claim 48. (Original) The apparatus according to claim 40, wherein the organ comprises a heart, and wherein the probe comprises a catheter.